CLAIMS

1. An ink comprising a resin component and a filler, wherein a cured coating film obtained through printing of said ink by screen printing and then heat treatment thereof has an edge with a tilt angle of 15° or more with respect to the printed surface.

2. The ink as claimed in claim 1, wherein, at the temperature of printing, the complex viscosity (η^*) of the ink is from 10,000 to 300,000 poise at the frequency of 1 rad/sec, and at the same time, the complex viscosity (η^*) of the ink is from 1,000 to 30,000 poise at the frequency of 10 rad/sec.

3. The ink as claimed in claim 1, wherein, at the temperature of printing, the complex viscosity (η^*) of the ink at the frequency of 1 rad/sec is from 4 to 16 times the complex viscosity (η^*) of the ink at the frequency of 10 rad/sec.

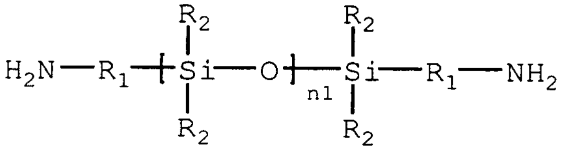
4. The ink as claimed in claim 1, wherein said resin component exhibits a heat curing reaction in a temperature range from 100 to 210°C.

5. The ink as claimed in claim 1, wherein said resin component exhibits heat curing by a reaction of an aromatic dicarboxylic acid anhydride group or an aromatic dicarboxylic acid mono ester group with an epoxy group or a blocked isocyanate group, a reaction of a blocked isocyanate group with a hydroxyl group or a carboxyl group, a reaction product of an epoxy group with a hydroxyl group, a carboxyl group or an amide group, or a combination of said reactions.

6. The ink as claimed in claim 1, which comprises from 30 to 300 parts by weight of the filler having an average particle size of less than 1.0 μm per 100 parts by weight of the resin component.

7. The ink as claimed in claim 1, wherein the resin component comprises (a) a polyimidosiloxane

comprising a tetracarboxylic acid component and a diamine component containing a diaminopolysiloxane represented by formula (1), and (b) an epoxy compound and/or a blocked polyvalent isocyanate:



$$H_2N-R_1-\left[\underset{R_2}{\overset{R_2}{|}}\!\!\!\!\overset{}{Si}-O\right]_{n1}-\underset{R_2}{\overset{R_2}{Si}}-R_1-NH_2 \qquad (1)$$

wherein R_1 represents a divalent hydrocarbon group or aromatic group, each R_2 independently represents a monovalent hydrocarbon group or aromatic group, and n1 represents an integer of 3 to 30.

8. The ink as claimed in claim 7, wherein the diamine component of the polyimidosiloxane is an aromatic diamine having a hydroxyl group and/or a carboxyl group on a side chain thereof.

9. A method for producing printed matter comprising a cured coating film, said method comprising printing the ink claimed in any one of claims 1 to 8 by screen printing and then heat-treating it at a temperature of 60 to 210°C.

10. The method according to claim 9, to produce printed matter having patterns defined by a line-and-space of 80 μm or less.

11. The method according to claim 9, to produce printed matter having patterns defined by a line-and-space of 50 μm or less.

12. The method according to claim 9, to produce printed matter having patterns defined by a line-and-space of 30 μm or less.

13. Printed matter comprising a cured coating film obtained by printing the ink claimed in any one of claims 1 to 8 by screen printing and then heat-treating it.

14. The printed matter according to claim 13, which has patterns defined by a line-and-space of 80 μm or less.

15. The printed matter according to claim 13, which has patterns defined by a line-and-space of 50 μm or less.

16. The printed matter according to claim 13, which has patterns defined by a line-and-space of 30 μm or less.